UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
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OCT 15 2010

Robert Gibbs
Vice President
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36-42 Newark Street, Suite 402
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Subject: Garden State Offshore Energy Outer Continental Shelf Air Permit Application for the SeaZephIR™ Spar Buoy Meteorological Station Project

Dear Mr. Gibbs:

On October 1, 2010, US EPA Region 2 (EPA) has received Garden State Offshore Energy (GSOE)'s Outer Continental Shelf (OCS) air permit application for a SeaZephIRTM (SZ) Spar Buoy Meteorological Station Project (buoy project). The buoy project is proposed to be located within the OCS Mineral Management Service lease block 7033, approximately 20 miles off the coast of Southern New Jersey (between Atlantic and Ocean counties). After reviewing the application and all relevant regulations, EPA has determined that no OCS air permit is required for the GSOE's buoy project. EPA's rationale for this determination is provided below:

Project Overview

Description:

The purpose of the buoy project is to collect site-specific meteorological data to support the engineering and design of a wind farm that GSOE plans on building off the coast of Southern New Jersey. The buoy project is expected to become operational in December 2010 and to last for 24 months. Once the necessary data has been collected, the SeaZephIRTM (SZ) Spar Buoy Meteorological Station will be decommissioned from the site. The SeaZephIRTM (SZ) Spar Buoy Meteorological Station is a spar buoy equipped with a Zephir light detection and ranging (LIDAR) monitoring station unit that will provide wind measurement data that can be accessed via radio link. The spar buoy includes a floating spar buoy platform and a clump weight anchor. The spar buoy's platform will be approximately 100 feet in length and six feet in diameter, and will house the: LIDAR equipment, power sources (i.e., batteries, solar panels, and wind micro-turbines), and passive acoustic monitoring system. The spar buoy platform will be anchored to the ocean floor with a single clump weight anchor in a depth of about 80 feet. The buoy project will consist of the following phases: installation, operation and decommissioning. The construction and decommissioning activities of the spar buoy will

take about two days each and will involve the use of two work barges (i.e., barges without propulsion engines), two tugboats used to tow the barges, and also a small boat (i.e., work skiff) for ancillary tasks. The work barges will carry the spar buoy's components (i.e., spar buoy platform and clump weight), construction equipment (i.e., deck engine for winch, welding arc power, crane, diver's air supply, air tools, water pump), and construction material from the onshore locations to the buoy project location (or from buoy's location to the onshore locations during the decommissioning phase). Once at the project site the work barges will attach to the seafloor through four anchors. The operational phase includes activities for the service and maintenance of the spar buoy. A crew boat will be used to transport personnel and equipment (as needed) from the onshore locations. The estimated number of crew boat roundtrips is 12 trips per year.

Emission sources:

The emissions sources associated with the buoy project are as follows:(1) tugboats and crewboat propulsion and auxiliary engines (i.e., used to provide power for the vessel); (2) work barges auxiliary engines (i.e.., used to provide power for the barges); (3) construction equipment engines (i.e., located on the work barges); and (4) work skiff's engine.

Potential to emit:

The estimated annual air contaminants emissions (i.e., potential to emit or PTE) from all emissions sources associated with the construction, operation, or decommissioning of the buoy project are as follows: 4.33 tons per year (TPY) of nitrogen oxide (NO_x), 1.11 TPY of carbon monoxide (CO), 0.71 TPY of volatile organic compounds (VOC), 0.012 of sulfur dioxide (SO2), 0.30 TPY of particulate matter (PM), 0.30 TPY of particulate matter less than 10 microns (PM_{10}) emissions, and 0.30 TPY of particulate matter less than 2.5 microns ($PM_{2.5}$).

Emissions of all other air contaminants, including Hazardous Air Pollutants , not listed in the buoy project's PTE are estimated to be less than their specified reporting threshold(s) in the New Jersey Administrative Code, Title 7, Chapter 27 (N.J.A.C 7-27), Subchapter 8 " Permits and Certificates for Minor Facilities", Appendix 1, Table A and B.

Background of the Regulatory Analysis

Section 328(a) of the Clean Air Act (CAA), requires the Environmental Protection Agency to establish requirements to control air pollution from OCS sources in order to attain and maintain Federal and State ambient air quality standards and to comply with the provisions of part C of title I of the Act. The OCS regulations at 40 C.F.R. Part 55 (Part 55) implement Section 328 of the CAA and establish air pollution control requirements for OCS sources and the procedures for implementation and enforcement of the requirements. Part 55 applies to all OCS sources offshore of the States except those located in the Gulf of Mexico west of 87.5 degrees longitude. The Energy Policy Act of 2005, amended

section 8 of the Outer Continental Shelf Land Act (OCSLA) to allow the Department of the Interior to authorize activities on the OCS that "produce or support production, transportation, or transmission of energy from sources other than oil and gas."[1] The proposed buoy project is such an activity, and therefore it is an "OCS source" subject to section 328 of the CAA and the implementing regulations set forth in Part 55.

In light of the regulatory definition of an OCS source[2], the spar buoy by itself, once constructed (i.e., during its operational phase) will not be an OCS source because even though attached to the seafloor, it has no potential to emit any air pollutant.
The crew boat that will provide service and maintenance for the spar buoy, during the buoy project's operational phase, it will attach either to the seafloor or to the spar buoy, and it will result in emissions. However, while attached to the seafloor, the crew boat will not be an OCS source because it is not used to "produce or support production, transportation, or transmission of energy sources other than oil and gas."[3] Furthermore, while attached to the spar buoy, the crew boat is not an OCS source because the spar buoy by itself is not an OCS source.[4] In conclusion, during its operational phase, the buoy project will cease to be an OCS source. Nevertheless, activities involving the buoy project's construction and decommissioning activities do have the potential to emit, and therefore come within the definition of an OCS source. The OCS source will include the work barges while they are attached to the seafloor or to an OCS source. At those times, the GSOE's work barges' auxiliary and construction equipment engines would be considered stationary engines [5] and subject to the stationary source requirements[6].

Under the OCS source regulations[7] the "potential emissions"(i.e. potential to emit or PTE) from an OCS source include: (1) the emissions from the OCS source operating at its design capacity, and (2) the emissions from vessels servicing or associated with an OCS source while at the source, and while en route to or from the source when within 25 miles of the source. Thus, in the case of GSOE's buoy project the PTE should include: (1) the emissions from the working barges' auxiliary and construction equipment engines, while the barges are within the definition of an OCS source; and (2) the emissions from the tugboats and work skiff propulsion and auxiliary engines, while the tugboats and work skiff are at the buoy project location (and the working barges are within the definition of an OCS source). The GSOE's air permit application included all the emissions listed above in estimating the buoy project's PTE and therefore, it meets all the regulatory requirements related to the PTE.[8] As explained above, during its operational phase, the buoy project is not an OCS source. Therefore, the emissions from the service and maintenance crew boat will not need to be included in the buoy project PTE. However, GSOE has estimated their

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[1] See 43 U.S.C. § 1337(p) (1) (C).
[2] See Section 328 (a)(4)(C), and 40 CFR 55.2.
[3] See 43 U.S.C. § 1337(p) (1) (C).
[4] See Section 328 (a)(4)(C), and 40 CFR 55.2.
[5] See CAA § 302 (z), 42 U.S.C. § 7602(z) (definition of "stationary source"), CAA§ 216 (10), 42 U.S.C § 7550(10)(definition of "nonroad engine").
[6] As provided in CAA§ 328(a)(1), all standards adopted under CAA § 328 are considered standards under CAA § 111(which apply only to stationary sources), and the term "new OCS source" is defined in "stationary source" terms pursuant to CAA § 111(a).
[7] See Section 328 (a)(4)(C), and 40 CFR 55.2.
[8] See Section 328 (a)(4)(C), and 40 CFR 55.2

PTE by including the service and maintenance crew boat's emissions; this is the most conservative approach of determining the buoy's project PTE.

The federal requirements that apply to OCS sources are provided in 40 CFR 55.13. While attached to the seafloor, the work barges auxiliary engines and the construction equipment engines (on the work barges) may be subject to 40 C.F.R. Part 60, Subpart IIII "Standard of Performance for Stationary Compression Ignition Internal Combustion Engine", and 40 C.F.R. Part 63, Subpart ZZZZ "National Emissions Standards for Hazardous Air Pollutants for Stationary Internal Combustion Engines." The buoy project's engines to which Subpart IIII and ZZZZ may apply, would meet these standards' requirements.

Under Section 328 and Part 55, the requirements for OCS sources located within 25 miles of the state's seaward boundary are the same as would be applicable if the sources were located in the corresponding onshore area (COA).[9] In the case of the GSOE's buoy project the COA is the State of New Jersey. Thus, the buoy project emission sources are subject to the applicable regulations of the N.J.A.C 7:27, the applicable provisions of which have been incorporated into 40 C.F.R Part 55, Appendix A. Section 328(a) (1) requires that EPA update the OCS requirements as necessary to maintain consistency with the onshore requirements. On January 22, 2010, EPA took final action to update the OCS air regulations that pertains to the requirements for OCS sources in the State of New Jersey, current as of August 13, 2009.

The N.J.A.C 7:27-8 "Permits and Certificates for Minor Facilities"(Subchapter 8), details the sources of air contaminants[10] located at minor facilities[11] that are required to have a permit and certificate to operate[12] under the provisions of Subchapter 8. Pursuant to N.J.A.C 7:27-8.2(c) (1) "commercial fuel burning equipment, that has a maximum rated heat input (MRHI) of 1,000,000 BTU per hour or greater, is required to have a (preconstruction) permit and certificate to operate (i.e., air permit). Based on its potential to emit, the GSOE's buoy project is a minor facility. Consequently, the project's engines with a MRHI equal to or greater than 1,000,000 BTU, which are subject to the stationary source requirements, would require an air permit. Moreover, it should be noted that given its potential to emit and the type of emissions sources, the GSOE's buoy project is required to obtain an air permit solely pursuant to the Subchapter 8's provisions.

Discussion on the buoy project's potential impacts on the ambient air quality

As noted above, the purpose of the OCS regulations is to attain and maintain federal and state ambient air quality standards. The attainment status for the Federal OCS waters is unclassified because there are no provisions for any classification in the CAA for waters outside the boundaries of State waters. Only areas within State boundaries are classified as either attainment, nonattainment, or unclassifiable. However, air quality in the adjacent onshore areas may be affected by releases on air pollutants from OCS sources. Therefore,

[9] See 40 CFR 55.2.
[10] See N.J.A.C 7:27- 8.1 and 8.2.
[11] See N.J.A.C 7:27-8.1.
[12] See N.J.A.C 7:27- 8.1.

the potentially affected onshore areas are formally designated as COA and the National Ambient Air Quality Standards (NAAQS) attainment status of those COA is applied to the OCS areas under consideration. The buoy project's COA, the State of New Jersey (including the project's site two nearest counties: Atlantic and Ocean), in general is attainment for all pollutants, except for ozone. Warren County is nonattainment also for SO2, and six counties: Burlington, Essex, Hudson, Middlesex, Monmouth, and Union counties are classified nonattainment for $PM_{2.5}$.

There are two major New Source Review permitting programs the Nonattainment NSR (NANSR)[13]and the Prevention of Significant Deterioration (PSD) regulations (40 CFR 52.21 et seq.), to which the OCS sources may be subject through Part 55. However, these programs apply only to major sources (or major modifications to major sources) located in areas that are not attaining, and respectively in areas that are attaining the applicable NAAQS. The GSOE's buoy project is not a major source because its emissions fall below the major source thresholds established by the Clean Air Act, and therefore is not subject to these federal regulations.

The buoy project has a low level of emissions rates; these emissions are short duration (i.e., two days per year), and they occur at a long distance (i.e., 20 miles) from the onshore area. Therefore, EPA believes that GSOE's buoy project would not result in exceedance of any currently attained NAAQS, would not adversely impact ozone levels for which the state of New Jersey is nonattainment, and also would not result in any significant impacts on the onshore receptors.

Memorandum "Air Quality Permit Applicability at Construction Sites"

To provide guidance to the Air Quality Staff, the public, and the regulated community in determining when air permits, pursuant to N.J.A.C 7:27-8, are required at construction sites, the New Jersey Department of Environmental Protection, Division of Air Quality (NJDEP) has issued a Memorandum called "Air Quality Permit Applicability at Construction Sites." (See enclosed). The Memorandum has been issued on January 6, 2010, and it is available on line at http://www.nj.gov/dep/aqpp/downloads/isg/Construction%20Guidance.pdf. This document outlines the types of equipment used at the construction site that do require an Air Quality Permit (i.e., air permit as well as the types of equipment that do not require an air permit. The GSOE's buoy project's site meets the construction site definition contained in the NJDEP Memorandum. Also, based on Section II of the Memorandum, the buoy project engines which would otherwise require a Subchapter 8 air permit (i.e., work barge auxiliary engines, construction equipment engines) are identified as the types of equipment (e.g., mobile crane engines, portable engines that provide electrical or mechanical power for pumps, lighting, pumps, welding equipment, compressor, etc.,) that do not require a Subchapter 8 air permit.

[13] See N.J.A.C 7:27-18 "Emission Offset Rule"

Conclusion

The regulatory analysis above shows that during its construction and decommissioning activities, the GSOE's SeaZephIR™ Spar Buoy Meteorological Station Project is considered an OCS source, and certain work barges auxiliary and construction engines would normally require an air permit pursuant to Subchapter 8. However, the buoy project is not a major source under the CAA, and under the NJDEP Memorandum "Air Quality Permit Applicability at Construction Sites", these engines do not require a Subchapter 8 air permit. EPA recognizes that the NJDEP Memorandum is not part of the New Jersey air regulations (i.e..., incorporated in the Part 55, Appendix A), it however does outline the types of equipment that do not require an air permit in the proposed project's COA. EPA has therefore determined that the proposed GSOE buoy project does not require an OCS air permit since one would not be required in the COA.

If we can answer any questions regarding our determination, please feel free to call my office at 212-637-4074, or to speak with Ms.Viorica Petriman at 212-637-4021.

Sincerely,

Steven Riva, Chief
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